SEQUENCE LISTING

<110> Garnaat, Carl W.
     Roth, Bradley A.

<120> ZmAxig1 Polynucleotides and Methods of
  Use

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<141> 2001-07-13·

<150> US 60/217,942
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gag ctc ggg ctc gcg ccg ccg aac ccg cat cag ccg ctg gct gcc gcc   226
Glu Leu Gly Leu Ala Pro Pro Asn Pro His Gln Pro Leu Ala Ala Ala
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Ala Glu Phe Val Gly Leu Leu Ser Ser Ser Ala Gly Ser Cys Gly Asn
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cgc gac ggc gtc gtc gac cat gaa cag caa agc aac aat gta ccc agg   418
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Ser Cys Gly Gly Gly Tyr Val Lys Val Lys Leu Glu Gly Val Pro Ile
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Gly Arg Lys Val Asp Val Ser Ile His Gly Ser Tyr Gln Glu Leu Leu
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Arg Thr Leu Glu Ser Met Phe Pro Ser Gly Asn Gln Gln Asp His Ala
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gaa gac gag gtg gtg gtc tcg cac gag cgc cgc cgt cgc cat cct tat    658
Glu Asp Glu Val Val Val Ser His Glu Arg Arg Arg Arg His Pro Tyr
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Val Val Thr Tyr Glu Asp Gly Glu Gly Asp Trp Leu Leu Val Gly Asp
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gat gtg ccg tgg gag gtc ttt gtc aag tca gtg aag cgg ctc aag ata    754
Asp Val Pro Trp Glu Val Phe Val Lys Ser Val Lys Arg Leu Lys Ile
180                 185                 190                 195

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Ala Thr Leu Pro Leu Phe Val Cys Glu Asp Gly Asp Gly Gly Gly Gly
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2

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Val Pro Ile Gly Arg Lys Val Asp Val Ser Ile His Gly Ser Tyr Gln
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Glu Leu Leu Arg Thr Leu Glu Ser Met Phe Pro Ser Gly Asn Gln Gln
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Asp His Ala Glu Asp Glu Val Val Val Ser His Glu Arg Arg Arg Arg
145                 150                 155                     160
His Pro Tyr Val Val Thr Tyr Glu Asp Gly Glu Gly Asp Trp Leu Leu
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7

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gcgcgtcgca cacccgcag ggcagcggcg gcttggagca cccgcacccg ttcgcgtaca 900
agtagctagt tcgtacgtcg ttcgacttga gcaagccatc gatctgctga tctgaacgta 960
cgctgtattg tacacgcatg cacgtacgta tcggcggcta gctctcctgt ttaagttgta 1020
ctgtgattct gtcccggccg gctagcaact tagtatcttc cttcagtctc tagtttctta 1080
gcagtcgtag aagtgttcaa tgcttgccag tgtgttgttt tagggccggg gtaaaccatc 1140
cgatgagatt atttcaaaaa aaaaaaaaaa aaa                               1173
```

<210> 19
<211> 763
<212> DNA
<213> Zea mays

<400> 19
```
gcacgaggca agaccgtcac ctccgaggac atcgtgtggg ccatgagccg cctcggcttc 60
gacgactacg tcgcgcccct cggcgccttc ctccagcgca tgcgcgacga cagcgaccac 120
ggcggtgaag agcgcggcgg ccctgcaggg cgtggtggct cgcgccgcgg ctcgtcgtcc 180
ttgccgctcc actgcccgca gcagatgcac cacctgcacc cagccgtctg ccggcgtccg 240
caccagagcg tgtcgcctgc tgcaggatac gccgtccggc ccgttccccg cccgatgcca 300
gcccgtgggt accgcatgca gggcggagac caccgcagcg tgggcggcgt ggctccctgc 360
agctacggag gggcgctcgt ccaggccggt ggaacccaac acgttgttgg attccacgac 420
gacgaggcaa gctcttcgag tgaaaatccg ccgccggagg ggcgtgccgc tggctcgaac 480
tagcctagct tctcagttcc ccgtgtacaa taagaggggc ggtcgcggcg ccgcgccgcg 540
cccttgggtt gggccgggcg ctatgctgca gtttggtttg taaactaacg agcctaggt 600
agctggtgca cgcgcgccac ctcgccggac gtcgccgtcg tcgtcggcat ggacttaacc 660
ggcgggccct gttgttattt ctcaagtttg tagccaacgc actgttcggt gcgttccata 720
atttaattta ccatgttgct ctcgaaaaaa aaaaaaaaaa aaa                   763
```

<210> 20
<211> 622
```

8

<212> DNA
<213> Zea mays

<220>
<221> misc_feature
<222> (1)...(622)
<223> n = a, t, c, or g

<400> 20
```
gcatgaataa tccccaaaac cctaaagcca gtgctccttg caccttgcca ccggagcttc 60
ccaaagaagc agtggcgacc gacgaagcac cgccgccaat gggcaacaac aacaacacgg 120
aatcggcgac ggcgacgatg gtccgggagc aggaccggct gatgcccgtg gccaacgtgt 180
cccgcatcat cgccaagtg ctgcctccgt acgccaagat ctccgacgac gcccangaag 240
tnatccaaga attgctnttc ggaatttcat cacttncgtc ctggcgaggc gaaacgaagc 300
ggtgccacac cgagcgccgc aagaccgtca cctccgaaga catcgtgtgg gccatgagcc 360
gcctcggctt cgacgactac gtcgcgcccc tcggcgcctt cctccagcgc atgcgcgacn 420
acagcgaaca cggggggtgaa aacgcggcgg cctgcanggg gtngtggtcn cgccgcgggt 480
cgtctncttg gcgctcccctt gccgcaanag atgacaactt gcaccaaacg tctgccgggn 540
tcggaccaaa actnttcccct gttgcaggaa tacccgtccn gggccnttcc cccccnaatc 600
caaccatttg gtttcccctt gc   622
```

<210> 21
<211> 65
<212> PRT
<213> Zea mays

<220>
<221> VARIANT
<222> (1)...(65)
<223> Xaa = any amino acid

<400> 21
```
Arg Glu Gln Asp Xaa Xaa Met Pro Ile Ala Asn Val Ile Arg Ile Met
 1   5   10   15
Arg Xaa Xaa Leu Pro Xaa His Ala Lys Ile Ser Asp Asp Ala Lys Glu
            20   25   30
Xaa Ile Gln Glu Cys Val Ser Glu Tyr Ile Ser Phe Xaa Thr Xaa Glu
        35   40   45
Ala Asn Xaa Arg Cys Xaa Xaa Xaa Xaa Arg Lys Thr Xaa Xaa Xaa Glu
    50   55   60
Xaa
65
```

<210> 22
<211> 1309
<212> DNA
<213> Zea mays

<400> 22
```
cccatcgctg ctttgtctac atcatgttct tcatcatcct ccccaggcga cgcgtgctgc 60
tgttcttatt cagactaccg ttcgagtgac tgcatggcgt acatctttct gcatcgactt 120
tgtacggcta catcgaacat atacacgaga tgtctcgtgt gaatagagtc actaatgcct 180
taagcatcgg ttactccgta gggtacattc tgttcttctt atttgtgcat attttttattg 240
ttgtttactg attatacgag tagttataca tacatgcaca tacatatcat cacatatatc 300
acaatatttt tctaaattaa attaaaacta aaaatgacta aatttctaac accaacgaca 360
```

9

```
ttgtaatgtt ttctccaaca actttaccta ttctacattg ttctatttcg aatttcactc 420
tataaacaac atagtctaca atggaaaaca gtgctttgta cgactatata cgcgatgtgt 480
ggctacaaca taagacaata tagtcgtttg aagattgaac ctatatatcg gtacggttaa 540
tccgtctatg tacgtgggca tgacgaacac ccgtgataac gaaggattaa cgtgcacaat 600
cataaatcca aagtaggagc ggtgcatgat gagaatcgct ctcagtactc gacataatga 660
accttacgag gtacaacagg caggcaggca gggaccaggg gccgccttta tttcaggctc 720
gctggcccca cgggcgtgct gcgtgcacga agggcactac cccaacctct caccgaaaac 780
cgcgctggat cggcaaatca aacgaggtgg tgccccgtgc ccactctcca cgtccacggc 840
accatccctc tgcagccgct caccagccat gccgtgtcgc ggaacggcac aaccaccccc 900
aacccactca cgaaaccccg tcccggccgt gcccgtgtcg gtccgcgctc ggcaacgagg 960
cggcccgcgc tgctgagtcc cctggacacc cgacaccctg tcggcccttt gtttattcat 1020
cccgaaatct catctgcccc cacggccgac tgcgctgcgc cgcccggata tatatacccca 1080
tcgttatcga tcgatcgatc gcgtcactca cgggtagctc atggtcgagc gtagcatgca 1140
ggaacttatt tgccgtgcgc tcccaggtct ccgctcgcgt gccttccagt ctgtctcaca 1200
ctagctgctg tgggacgatc gaagtgggtg tgtcagctag ctagctgcgc cgtgaccacg 1260
cacatgaccg cagtgcgcgc ggggctgatc aagggaaagt gatcggatg 1309
```

```
<210> 23
<211> 664
<212> DNA
<213> Zea mays
```

```
<400> 23
actcgacata atgaacctta cgaggtacaa caggcaggca ggcagggacc aggggccgcc 60
tttatttcag gctcgctggc cccacgggcg tgctgcgtgc acgaagggca ctaccccaac 120
ctctcaccga aaaccgcgc tggatcggca aatcaaacga ggtggtgccc cgtgcccact 180
ctccacgtcc acggcaccat ccctctgcag ccgctcacca gccatgccgt gtcgcggaac 240
ggcacaacca ccccccaaccc actcacgaaa ccccgtcccg gccgtgcccg tgtcggtccg 300
cgctcggcaa cgaggcggcc cgcgctgctg agtcccctgg acacccgaca ccctgtcggc 360
cctttgttta ttcatcccga aatctcatct gcccccacgg ccgactgcgc tgcgccgccc 420
ggatatatat acccatcgtt atcgatcgat cgatcgcgtc actcacgggt agctcatggt 480
cgagcgtagc atgcaggaac ttatttgccg tgcgctccca ggtctccgct cgcgtgcctt 540
ccagtctgtc tcacactagc tgctgtggga cgatcgaagt gggtgtgtca gctagctagc 600
tgcgccgtga ccacgcacat gaccgcagtg cgcgcggggc tgatcaaggg aaagtgatcg 660
gatg 664
```

```
<210> 24
<211> 664
<212> DNA
<213> Zea mays
```

```
<400> 24
actcgacata atgaacctta cgaggtacaa caggcaggca ggcagggacc aggggccgcc 60
tttatttcag gctcgctggc cccacgggcg tgctgcgtgc acgaagggca ctaccccaac 120
ctctcaccga aaaccgcgc tggatcggca aatcaaacga ggtggtgccc cgtgcccact 180
ctccacgtcc acggcaccat ccctctgcag ccgctcacca gccatgccgt gtcgcggaac 240
ggcacaacca ccccccaaccc actcacgaaa ccccgtcccg gccgtgcccg tgtcggtccg 300
cgctcggcaa cgaggcggcc cgcgctgctg agtcccctgg acacccgaca ccctgtcggc 360
cctttgttta ttcatcccga aatctcatct gcccccacgg ccgactgcgc tgcgccgccc 420
ggatatatat acccatcgtt atcgatcgat cgatcgcgtc actcacgggt agctcatggt 480
cgagcgtagc atgcaggaac ttatttgccg tgcgctccca ggtctccgct cgcgtgcctt 540
ccagtctgtc tcacactagc tgctgtggga cgatcgaagt gggtgtgtca gctagctagc 600
tgcgccgtga ccacgcacat gaccgcagtg cgcgcggggc tgatcaaggg aaagtgatcc 660
catg 664
```

```
<210> 25
```

10

<211> 663
<212> DNA
<213> Zea mays

<400> 25
```
actcgacata atgaacctta cgaggtacaa caggcaggca ggcagggacc aggggccgcc   60
tttatttcag gctcgctggc cccacgggcg tgctgcgtgc acgaagggca ctaccccaac  120
ctctcaccga aaaccgcgct ggatcggcaa atcaaacgag gtggtgcccc gtgcccactc  180
tccacgtcca cggcaccatc cctctgcagc cgctcaccag ccatgccgtg tcgcggaacg  240
gcacaaccac ccccaaccca ctcacgaaac cccgtcccgg ccgtgcccgt gtcggtccgc  300
gctcggcaac gaggcggccc gcgctgctga gtccctgga cacccgacac cctgtcggcc  360
ctttgtttat tcatcccgaa atctcatctg ccccacggc cgactgcgct gcgccgcccg  420
gatatatata cccatcgtta tcgatcgatc gatcgcgtca ctcacgggta gctcatggtc  480
gagcgtagca tgcaggaact tatttgccgt gcgctcccag gtctccgctc gcgtgccttc  540
cagtctgtct cacactagct gctgtgggac gatcgaagtg ggtgtgtcag ctagctagct  600
gcgccgtgac cacgcacatg accgcagtgc gcgcggggct gatcaaggga aagtgatcgg  660
atg                                                               663
```

<210> 26
<211> 663
<212> DNA
<213> Zea mays

<400> 26
```
actcgacata atgaacctta cgaggtacaa caggcaggca ggcagggacc aggggccgcc   60
tttatttcag gctcgctggc cccacgggcg tgctgcgtgc acgaagggca ctaccccaac  120
ctctcaccga aaaccgcgct ggatcggcaa atcaaacgag gtggtgcccc gtgcccactc  180
tccacgtcca cggcaccatc cctctgcagc cgctcaccag ccatgccgtg tcgcggaacg  240
gcacaaccac ccccaaccca ctcacgaaac cccgtcccgg ccgtgcccgt gtcggtccgc  300
gctcggcaac gaggcggccc gcgctgctga gtccctgga cacccgacac cctgtcggcc  360
ctttgtttat tcatcccgaa atctcatctg ccccacggc cgactgcgct gcgccgcccg  420
gatatatata cccatcgtta tcgatcgatc gatcgcgtca ctcacgggta gctcatggtc  480
gagcgtagca tgcaggaact tatttgccgt gcgctcccag gtctccgctc gcgtgccttc  540
cagtctgtct cacactagct gctgtgggac gatcgaagtg ggtgtgtcag ctagctagct  600
gcgccgtgac cacgcacatg accgcagtgc gcgcggggct gatcaaggga aagtgatccc  660
atg                                                               663
```

11